

Amendments to the Specification:

Please replace the paragraph beginning at page 22, line 13, with the following redlined paragraph:

Figures 13A and 13B show an exemplary method 160 of monitoring the voltage across pairs of the fuel cell assemblies 16 in the fuel cell stack 12 and resuscitating the fuel cell stack 12 in response to a low voltage situation, starting in step 162. In step 164, the microcontroller 40 checks the voltage across pairs of fuel cells 20. The microcontroller 40 may sample or read the voltage across the fuel cell pairs every 200 microseconds. The microcontroller 40 can rely on a digital output of the cell voltage checker S9, such as the cell voltage checker described in commonly assigned U.S. patent application Serial No. 09/916,115, filed on the same date herewith, entitled "FUEL CELL ANOMALY DETECTION METHOD AND APPARATUS" (Atty. Docket No. 130109.406). For example, if the output of the cell voltage checker S9 is "0" or LOW, the microcontroller 40 determines that the voltage across at least one pair of the fuel cell assemblies 16 is below the cell pair threshold voltage. A suitable cell pair threshold voltage for the described embodiment may be between approximately 0.8V and 0.85V, where each fuel cell assembly 16 produces approximately 0.6V across the anode 22 and cathode 24. In step 166, the microcontroller 40 performs a first wait loop 168 if the voltage across a pair of fuel cell assemblies 16 is not less than the cell pair threshold voltage. The microcontroller 40 passes control to step 170 if the voltage across any pair of the fuel cell assemblies 16 is less than the cell pair threshold voltage.

Please replace the paragraph beginning at page 27, line 9, with the following redlined paragraph:

In step 254, the microcontroller 40 performs a wait loop 255 if the timer is not equal to or greater than the purge duration. In step 254, the microcontroller 40 passes control to step 256 if the timer equals or greater than the purge duration. In step 256, the microcontroller 40 sends a signal to the purge valve controller CS4 to close the purge valve 70, completing the purging of the fuel cell stack 12. While Figure 15 represents the purging as a single opening of the purge valve 70, the fuel cell system 10 can employ "pulsed" purging, where the purge valve

is opened two or more times in succession, with brief periods in between the successive openings. Such an operation is set out in detail in commonly assigned U.S. patent application Serial No 09/916,211_____, entitled "FUEL CELL PURGING METHOD AND APPARATUS (~~Atty. Docket No. 130109.407~~)."

Please add, beginning at page 31, between lines 8 and 9, the following new paragraph:

The oxygen concentration threshold value is set at approximately 18%, where a concentration greater than this limit is necessary to support human health. This concentration value is also the threshold that will, in the presence of hydrogen dissipation from the fuel cell system 10 of not greater than a critical leak rate, result in the fuel cell system 10 shutting down due to oxygen depletion to 18% before achieving a hydrogen concentration of 4% in the local atmosphere. (The lower flammability limit for hydrogen, which is the point at which hydrogen becomes dangerous, is equal to approximately 4% in the atmosphere.) The hydrogen concentration threshold is set at 1%, significantly below the flammability limit for hydrogen (*i.e.*, 4%). In a worse case scenario, *i.e.*, for a small room such as a closet having dimensions 36 x 40 x 96 inches with relatively low air exchange of .05 air exchanges/hour ("ACH"), the critical leak rate is approximately 1 liter/minute. Thus, oxygen monitoring can serve as a backup for hydrogen monitoring, described below, if the anticipated or expected dissipation of hydrogen from the fuel cell system 10, for example from controlled purging and/or from anticipated leaks, is maintained at a level below the critical leak rate. The fuel cell system 10 can employ larger critical leak rates if it is certain that the fuel cell system will operate in larger rooms and/or in rooms with higher air exchange rates than set out for the worse case scenario, above. An oxygen concentration of 18% is greater than a critical limit of oxygen concentration required to support human life.

Please replace the paragraph beginning at page 36, line 23, with the following redlined paragraph:

Commonly assigned U.S. patent applications Serial No. 09/916,241_____,
entitled "FUEL CELL AMBIENT ENVIRONMENT MONITORING AND CONTROL
APPARATUS AND METHOD" (Atty. Docket No. 130109.404); Serial No.
09/916,117_____, entitled "FUEL CELL CONTROLLER SELF INSPECTION" (Atty.
Docket No. 130109.405); Serial No. 09/916,115_____, entitled "FUEL CELL
ANOMALY DETECTION METHOD AND APPARATUS" (Atty. Docket No. 130109.406);
Serial No. 09/916,211_____, entitled "FUEL CELL PURGING METHOD AND
APPARATUS" (Atty. Docket No. 130109.407); Serial No. 09/916,213_____, entitled
"FUEL CELL RESUSCITATION METHOD AND APPARATUS" (Atty. Docket No.
130109.408); Serial No. 09/916,239_____, entitled "FUEL CELL SYSTEM
AUTOMATIC POWER SWITCHING METHOD AND APPARATUS" (Atty. Docket No.
130109.421); Serial No. 09/916,118_____, entitled "PRODUCT WATER PUMP FOR
FUEL CELL SYSTEM" (Atty. Docket No. 130109.427); and Serial No. 09/916,212_____,
entitled "FUEL CELL SYSTEM HAVING A HYDROGEN SENSOR," (Atty. Docket No.
130109.429); all filed July 25, 2001, are incorporated herein by reference, in their entirety.